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**SECTION 15580 - FEEDWATER EQUIPMENT****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section includes glycol feed tank and pump for chilled water system.

**1.3 SUBMITTALS**

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each type of product specified. Include manufacturer's technical product data, rated capacity of selected model, pump performance curve with selection points clearly indicated, weights (shipping, installed, and operating), furnished specialties, accessories, and installation and startup instructions.
- C. Shop drawings detailing fabrication and installation of feedwater equipment and indicating dimensions, weights, loadings, required clearances, method of field assembly, and components.
- D. Wiring diagrams detailing power and control wiring and differentiating clearly between manufacturer-installed wiring and field-installed wiring.
- E. Maintenance data for feedwater equipment to include in the operation and maintenance manual specified in Division 1.

**1.4 QUALITY ASSURANCE**

- A. Installer Qualifications: Engage an experienced Installer who has at least 3 years of successful installation experience on projects with feedwater equipment work similar to that required for this Project.
- B. Manufacturer Qualifications: Firm experienced in manufacturing feedwater equipment similar to that indicated for this Project and that has a record of successful in-service performance.

- C. Comply with NFPA 70 for the installation of electrically driven feedwater equipment.
- D. Listing and Labeling: Provide products specified in this Section that are listed and labeled.
  - 1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.
  - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
  - 1. Glycol Feed Units:
    - a. Dunham-Bush, Inc.; Dunham Division.
    - b. Fairbanks Morse Pump Corp.
    - c. Grundfos Pumps Corp.
    - d. ITT Fluid Technology Corp./Domestic Pump.
    - e. Paco Pumps.
    - f. Peerless Pump.
    - g. Weil Pump Co.
    - h. Skidmore.

### 2.2 CHILLED WATER FEED UNITS

- A. Unit consisting of polyethylene tank, positive displacement water pump with bypass, pressure switch, controller, and accessories.
- B. Control Sequence: As chilled water pressure drops, start pump; as pressure restores, stop pump.
  - 1. Selector switch for pump; AUTOMATIC-OFF-CONTINUOUS.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install units level and plumb, according to manufacturer's written instructions.

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- B. Support feedwater equipment on 4-inch- (100-mm-) high concrete pad, where indicated.

- C. Install feedwater equipment accessories.

### 3.2 CONNECTIONS

- A. Connect feedwater piping, vents, and drains.
- B. Connect control panels and components to wiring systems and to ground as indicated and instructed by manufacturer. Tighten connectors and terminals, including screws and bolts, according to equipment manufacturer's published torque-tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals according to tightening requirements specified in UL 486A.
  - 1. Install electrical devices furnished by manufacturer but not specified to be factory mounted. Furnish copy of manufacturer's wiring diagram submittal to electrical Installer.

### 3.3 CLEANING

- A. After completing system installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris; repair damaged finishes, including chips, scratches, and abrasions.

### 3.4 COMMISSIONING

- A. Startup feedwater equipment according to manufacturer's startup instructions. Test controls and demonstrate compliance with requirements. Replace damaged or malfunctioning controls and equipment.

### 3.5 DEMONSTRATION

- A. Train Owner's maintenance personnel on procedures and schedules related to startup and shutdown, troubleshooting, servicing, and preventive maintenance.
- B. Review data in the operation and maintenance manuals. Refer to Division 1 Section "Contract Closeout."
- C. Schedule training with Owner, through the Architect, with at least 7 days' advance notice.

**BLACKFEET COMMUNITY HOSPITAL**

Expansion & Renovation, Phases 1 & 2  
Browning, Montana

**C168**

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END OF SECTION 15580

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FEEDWATER EQUIPMENT

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